

REMARKS

Claims 1-4 and 6-25 will be pending upon entry of the present amendment. Claims 1-3, 6, 7, 9, 10, 13, and 17-19 are amended, claim 5 is cancelled, and claims 21-25 are newly submitted herewith. No new matter has been added in the present amendment.

The Examiner has objected to claim 9 as lacking antecedent basis, and has suggested amending claim 9 to depend from claim 3. Claim 9 is therefore amended as suggested. Additionally, with reference to amendments to claims 3 and 9, the ordinal numbers used to designate positions of the spool in the valve have been changed to conform to the numbers recited in claim 1, which are added with the present amendment. These changes to claims 3 and 9 do not affect the scope or meaning of the claims, and are made for consistency only. Claim 10 has been amended to depend from claim 13. New claims 21-25 are submitted to provide additional scope of coverage, and are fully supported in the specification.

Claims 1-4, 8, 10-12, and 17 are rejected under 35 U.S.C. § 102(b) as being anticipated by Kolchinsky (FR 2106951); claims 5-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kolchinsky in view of Schuttenberg et al. (DE 3824205, hereafter *Schuttenberg*); claims 5 and 6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kolchinsky in view of Floyd (U.S. 3,290,996); and claims 13-16 and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kolchinsky in view of Akasaka et al. (U.S. 5,094,144, hereafter *Akasaka*).

Claim 1 has been amended to incorporate the subject matter of claim 5, and now recites, in part, “a feedback mechanism configured to apply a biasing force to the valve in a direction toward the first position, piston travel in the second direction tending to increase the biasing force and piston travel in the first direction tending to decrease the biasing force.” The Office Action acknowledges that Kolchinsky does not teach this limitation, and cites each of Schuttenberg and Floyd as teaching this limitation, suggesting that it would have been obvious “to modify the device of Kolchinsky, based on the teachings of Schuttenberg, ... for the purposes of safely positioning the actuator.” Because Schuttenberg is not in English, applicant is not able to confirm the Office Action’s position that Schuttenberg teaches or suggests a feedback mechanism corresponding to the feedback mechanism of claim 1. With regard to reliance on

foreign-language references, MPEP § 706.02(ii) states that “if the document is in a language other than English and the Examiner seeks to rely on that document, a translation must be obtained so that the record is clear as to the precise facts the Examiner is relying upon in support of the rejection.” Accordingly, if the Examiner elects to maintain the rejection of claim 1 on the same grounds, applicant respectfully requests that an English language translation be provided so that Schuttenberg’s precise scope can be determined. Alternatively, applicant respectfully requests withdrawal of the rejection of claim 1 over Schuttenberg.

Even if Schuttenberg is found to include a feedback mechanism that substantially corresponds to the limitations recited in claim 1, applicant does not believe that a combination of Schuttenberg with Kolchinsky is either motivated or reasonable. First, as best understood by the applicant, Schuttenberg provides a failsafe position 24 of its valve in which both fluid ports of the cylinder 29 are coupled to a low pressure fluid source T, and in which valve position, movement of the piston 31 would be substantially unimpeded in either direction. Thus, when Schuttenberg’s valve is in the failsafe position, its actuator is not thereby moved to a particular “safe” position, but is allowed to move or remain in any actuator position. Accordingly, to the best of Applicant’s understanding, and contrary to the motivation proposed in the Office Action, Schuttenberg does not teach “safely positioning the actuator,” but only safely positioning the valve. For its part, Kolchinsky fails to teach or suggest the desirability of such a failsafe valve position, does not provide a configuration in which its actuator is similarly free to move unimpeded, nor is it clear that such a condition would be reasonably considered a “failsafe” condition in the case of a cutting tool such as that taught by Kolchinsky, yet this is the condition that would result from a combination of Schuttenberg with Kolchinsky, barring a more specific teaching by Kolchinsky. Kolchinsky does not provide such a teaching, and is silent with regard to any advantage of moving its valve to a safe position, or what such a safe position might be, among the valve positions available.

Also of significance is the fact that Kolchinsky teaches the importance of a power stroke in the operation of its actuating cylinder, which would be adversely affected by the proposed combination. For example, in the first paragraph of text of the Kolchinsky translation, Kolchinsky states that it is directed “particularly to devices for control of hydraulic actuating

cylinders ... in which it is necessary to ensure rapid movement, rapid return, for example, of a carriage, while enabling it to execute its working power stroke” Additionally, Kolchinsky states, with reference to one of its valve positions, beginning at page 3, line 10, “such a position ensures the working power stroke of piston 20 and of carriage 21,” and with reference to another valve position, beginning at page 3, line 16, “the chambers on both sides of piston 20 are then pressurized ..., thus ensuring the rapid recoil of tool 22, that is, its return, during which it is not necessary to produce a cutting force.” It is clear from the text, including the portions quoted above, that for acceptable operation, Kolchinsky’s system requires a significant amount of force from the actuator during its working power stroke. A review of Kolchinsky’s figure and text shows that the working power stroke occurs when the piston 20 moves toward its open side, which corresponds to the second direction of claim 1. If Schuttenberg teaches a feedback mechanism such as that recited in claim 1, and if that feedback mechanism were combined with Kolchinsky’s distributor 1, the resulting system would be unsatisfactory for its intended purpose, as explained hereafter.

In order to initiate the power stroke of its piston 20 and carriage 21, Kolchinsky’s valve 2 is moved to its extreme right position, in which pressurized fluid is placed in fluid communication with Kolchinsky’s shaft-side chamber 18 while its outlet channel 10 is placed in fluid communication with the open side chamber 16 (see page 3, lines 6-11). This configuration corresponds substantially with the second position of the valve of claim 1, and will compel the piston 20 to move in a direction that corresponds to the second direction of claim 1. According to claim 1, piston travel in the second direction tends to increase a biasing force to the valve in a direction toward its first position, *i.e.*, away from the extreme right position required for Kolchinsky’s power stroke. As Kolchinsky’s piston moves in the second direction, the biasing force of the feedback mechanism toward the first position would increase, and it would become more and more likely that the biasing force would overpower Kolchinsky’s electromagnet 7 and begin to move the slide valve 2 toward its neutral point, in which the fluid channels are closed. Initially, such movement would choke the flow of high pressure fluid to the chamber 18, thereby reducing the power delivered to the actuator 17 and slowing the cutting operation. Continuing movement of the piston 20 in the second direction would further increase the biasing force and

progressively restrict fluid flow to the chamber 18, until the slide valve 2 closed the high pressure fluid source to the piston 17 entirely, at which point the piston would cease to move, perhaps before the cutting operation was completed. Clearly, such an arrangement is contrary to the teachings of Kolchinsky, and would render Kolchinsky unsuitable for its intended purpose (*see*, MPEP § 2143.01 V (“[i]f [a] proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification”)). For all of these reasons, a combination of Schuttenberg with Kolchinsky for the purpose of rejecting claim 1 under § 103 is inappropriate.

The Office Action also cites Kolchinsky in view of Floyd in rejecting claim 5, the limitations of which are now found in claim 1. Applicant believes that this combination, as well, is inadequate to support a case of *prima facie* obviousness of claim 1. As with Schuttenberg, the Office Action suggests a motivation for such a combination “for the purposes of safely positioning the actuator.” However, neither Kolchinsky nor Floyd teach or suggest safe positioning of an actuator, they do not they teach or suggest which of the positions of their respective actuators would be considered a safe position, nor does either reference provide a mechanism or describe the circumstances under which an actuator should be safely positioned. Without these teachings in the references, there is no such obvious motivation. Certainly, it is not known in the art in general that every actuator is made safer by being in one or another position.

Furthermore, the true motivation for the design of Floyd’s fluid circuit has no relevance or usefulness in Kolchinsky’s system. Floyd is directed to remote control systems for hydraulically operated valves, and in particular to the control of cargo valves in oil tanker vessels (column 1, lines 10-13). Floyd teaches a simpler and less expensive system for remotely controlling such cargo control valves and for providing “simple means for indicating at the control station whether or not the valve closure member has attained a particular position.” (See column 1, lines 32-35 and 48-51.) Thus, Floyd is directed to a system in which the actuator, remotely located from the operator and controlled by the valve circuit shown in the figure, is coupled to a cargo valve (not shown in the figure) whose operation is not directly visible or verifiable by the operator. In contrast, Kolchinsky is directed to a system for controlling the

operation of components of machine tools such as are used for cutting and removal of metal (See page 1, first paragraph). One of ordinary skill would recognize that operators of such machine tool systems are generally positioned at the tools, where operation of the tools can be directly controlled and verified. Accordingly, the advantages that Floyd offers to a remote operator are of no relevance to Kolchinsky.

Finally, even if a motivation for the combination of Floyd with Kolchinsky were available, such a combination would render Kolchinsky unsuitable for its intended purpose, for reasons similar to those described with reference to Schuttenberg, namely, Floyd's feedback mechanism would tend to progressively reduce the force of Kolchinsky's power stroke, reducing or defeating its effectiveness and rendering Kolchinsky unsuitable for its intended purpose. For all the reasons articulated above, applicant believes that claim 1 is allowable over the art of record.

Claim 13 has been amended to incorporate limitations similar to those found in original claim 5, and recites, "a feedback mechanism configured to apply a biasing force to the valve in a direction toward the first valve position, piston travel in the second direction tending to increase the biasing force to the valve and piston travel in the first direction tending to decrease the biasing force." A combination of Hakasaka with Kolchinsky fails to teach this limitation of claim 13. Furthermore, a combination of either of Floyd or Schuttenberg with Hakasaka and Kolchinsky for the purpose of rejecting claim 13 is inappropriate for reasons outlined above with respect to claim 1. Accordingly, claim 13 is allowable over the art of record.

Amended claim 17 recites, in part, "applying a biasing force to the valve urging the valve toward the first position; increasing the biasing force in relation to movement of the piston toward the second limit of movement; and decreasing the biasing force in relation to movement of the piston toward the first limit of movement." Kolchinsky fails to teach at least these limitations of claim 17, which is therefore allowable thereover.

Overall, the cited references do not singly, or in any motivated combination, teach or suggest the claimed features of the embodiments recited in independent claims 1, 13, or 17, and thus such claims are allowable. Applicant's decision not to argue the allowability of each of the dependent claims is not to be construed as an admission that such claims would not be

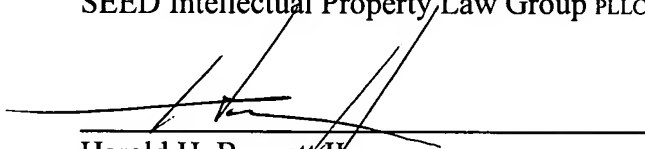
allowable but for their dependence on allowable base claims, and applicant reserve the right to present such arguments as may become necessary in the future. If the undersigned representative has overlooked a relevant teaching in any of the references, the Examiner is requested to point out specifically where such teaching may be found.

In light of the above amendments and remarks, Applicant submits that all pending claims are allowable, and therefore respectfully requests that the Examiner reconsider this application and timely allow all pending claims. Examiner Lazo is encouraged to contact Mr. Bennett by telephone at (206) 694-4848 to discuss the above and any other distinctions between the claims and the applied references, if desired. If the Examiner notes any informalities in the claims, he is encouraged to contact Mr. Bennett by telephone to expeditiously correct such informalities.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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